

REMARKS/ARGUMENTS

This Amendment is in response to the outstanding final Official Action mailed January 16, 2004, the shortened statutory period for filing a response having expired on April 16, 2004. In this regard, Applicants submit herewith a three-month extension petition resetting the deadline for responding to the Official Action to and including July 15, 2004. Also submitted herewith is a Notice of Appeal to maintain the pendency of the application while reconsideration is given to Applicants' response.

The present application includes claims 1-3, 5-9 and 31-36, of which claims 1 and 8 are presented in independent form. The Examiner has rejected claims 1, 2, 5-8 and 31-36 under 35 U.S.C. § 103(a) as being obvious over *Walsh*, United States Patent No. 5,478,462 in view of *George*, United States Patent No. 3,725,150; and claims 3 and 9 under 35 U.S.C. § 103(a) as being obvious over *Walsh* in view of *George*, and in further view of *Glenning et al.*, United States Patent No. 4,857,143. The Examiner has essentially maintained the same grounds of rejection as set forth in the prior Official Action of May 21, 2003, notwithstanding Applicants' amendments and remarks as set forth in Applicants' amendment of November 12, 2003.

In Applicants' prior response, independent claims 1 and 8 were distinguished over the prior art by the dihydric alcohol and water component being present in a ratio of from about 0.5:1 to about 8.5:1. As to independent claim 8, this claim was further distinguished by the potassium hydroxide being present from about 40 to about 80 grams per ml of glycol and water solution. As to the ratio of dihydric alcohol to water, the Examiner acknowledges that there is no disclosure of this ratio in *Walsh*. To this end, the Examiner refers to *George*, as

a basic teaching to control the extent of etching by manipulation of the parameters of concentration, time of exposure and temperature appropriate to the etchant selected, citing Col. 3, lns. 30-34. As such, the Examiner contends that it would be obvious to modify the ratio of dihydric alcohol to water in *Walsh* in view of the teachings of *George* to render the present invention obvious. In view of the below remarks, the Examiner's rejection is considered traverse and should therefore be withdrawn.

First, the component of Applicants' claimed composition which performs the etching function is the hydroxide compound which is selected from the group consisting of lithium hydroxide, sodium hydroxide, potassium hydroxide, calcium hydroxide, barium barium hydroxide, strontium hydroxide and mixtures thereof, see paragraph 0022. The dihydric alcohol and water component of the claimed composition does not perform the etching function which the Examiner appears to suggest. Thus, it is erroneous for the Examiner to state that it would be obvious to modify the dihydric alcohol to water content of *Walsh* with reference to *George* which teaches controlling the extent of etching by manipulating the concentration parameter of the "selected etchant". There is therefore no disclosure or suggestion in the prior art of modifying the dihydric alcohol to water ratio as claimed by Applicants'. Accordingly, the Examiner's rejection is factually flawed and, without more, must be withdrawn.

As to the claimed hydroxide content of about 40 to about 80 grams per ml of glycol and water solution, Applicants' in their prior response demonstrated that *Walsh* failed to disclose this claimed range. The Examiner has totally ignored and has failed to even comment on Applicants' traversing remarks on this issue. It can only be concluded that the Examiner has no continued support for the Examiner's obviousness position,

and therefore, must be withdrawn.

Furthermore, Applicants have pointed out to the Examiner in Applicants' amendment of November 12, 2003 the unexpected results obtained from Applicants' claim composition. These unexpected results support Applicants' position that the composition with claimed ratios of dihydric alcohol to water and hydroxide concentration patently distinguish the present invention over the prior art of record.

As to Applicants' unexpected results, the Examiner has erroneously failed to consider Applicants' arguments stating that the unexpected results are not cited in the pending claims. In support of the Examiner's failure to consider the unexpected results, the Examiner refers to *In re Van Geuns*, 26 U.S.P.Q. 2d 1057 (Fed. Cir 1993). The Examiner contends that the *In re Van Geuns* case supports the Examiner's position as the claims are to be interpreted in light of the specification, limitations from the specification are not to be read into the claims. Applicants acknowledge that the claims are silent as to the unexpected results disclosed in Applicants' specification and argued by Applicants in their prior amendment. However, these unexpected results as demonstrated in Applicants' specification and Applicants' prior amendment must be given full consideration when determining patentability of the present claims. The Examiner's reliance upon *In re Van Geuns*, is irrelevant to this issue, as well as being irrelevant to the patentability of Applicants' claimed invention.

The Examiner's attention is directed to the Court of Customs and Patent Appeals' decision in *In re Merchant*, 197 U.S.P.Q. 785, 788 (CCPA 1978), wherein the Court stated:

Finally, the solicitor repeats the objection voiced by the Examiner that the declaration is irrelevant because the claims specify neither the unexpected result nor the "features" that produce that result. We are aware of no law requiring that unexpected

results relied upon for patentability be recited in the claims. The "features" referred to by the Examiner are the conditions of pressure, feed rate, and reactor retention time for the commercial operation described in the declaration. We are equally unaware of any law requiring that commercial production parameters be claimed. Moreover, the "feature" responsible for Appellant's unexpected results is recited in the claims, viz., "substantially anhydrous."

The Examiner's attention is also directed to the Federal Circuit's decision in *In re Chu*, 36 U.S.P.Q. 2d 1089, 1094 (Fed. Cir. 1995), wherein the Federal Circuit stated:

The Board concluded, however, that placement of the SCR catalyst in the bag retainer was a matter of "design choice" and that Chu's evidence and arguments to the contrary were unpersuasive because Chu's "specification is virtually silent on the matter of any purported advantage to locating the catalyst within the bag retainer" and "does not state that the claimed location of the catalyst "inside the bag retainer" solves any particular problem or produces any unexpected result".

Because the Board was required to consider the totality of the record, the Board was not free to disregard the evidence and arguments presented by Chu in response to the obviousness rejection.

In the present application, Applicants have claimed a specific composition of components including dihydric alcohol, a hydroxide compound and water, in claimed amounts not disclosed in the prior art. As a result of these claimed features, Applicants' composition evidences the unexpected results which are not attainable by the cited prior art composition.

Walsh discloses an etch composition which is not intended to form openings in a polymer substrate, such as vias and through holes, but rather, only functions as a surface etchant for texturizing the surface of a polyimide material. As stated in *Walsh*, the disclosed composition renders the surface

of the polyimide material hydrophilic and provides a uniformly and completely frosted or matte appearance to the surface of the material, due to nodules remaining when surrounding material is selectively dissolved by the composition. The purpose of the nodules is to promote adhesion of the subsequently applied metal layer.

In contrast, the etch composition of the present invention is intended to form vias or through holes in a polymer substrate. In addition, as disclosed in Applicants' specification in paragraph 0025, the composition unexpectedly provides an etch end point color signal, i.e., red. The attributes of Applicants' claimed composition in forming vias and through holes in a polymer substrate, as well as providing a color end point signal, is based upon Applicants' claimed composition, which is different from the composition disclosed in *Walsh*.

As disclosed in Applicants' specification in paragraph 0033, the amount of hydroxide base should preferably be from about 40 to about 80 grams for 100 mls of glycol/water present in the composition. As a result of the high concentration of hydroxide base, there is unexpectedly created an end point signal when the etching is complete, i.e., producing the color red. In addition, as disclosed in paragraph 0033, to avoid contact pad blistering, the ratio of glycol to water should be in the range of from about 0.5:1 to about 8.5:1. It has been observed that pad blistering occurs when the ratio is less than about 0.5:1. As such, the composition of the present invention produces unexpected results of providing a color signal at the completion of the etching process, as well as preventing pad blistering during the etching process. There is no disclosure in *Walsh* of an identical composition which would anticipate Applicants' claimed invention, nor one which would render Applicants' claimed composition obvious.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that she telephone Applicants' attorney at (908) 654-5000 in order to overcome any additional objections which she might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: June 30, 2004

Respectfully submitted,

By 

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